THE ARMY DISTANCE LEARNING PROGRAM

ANY WHERE ANY TIME
TADLP
TRAINING EXCELLENCE

Preparing Our Soldiers for the 21st Century
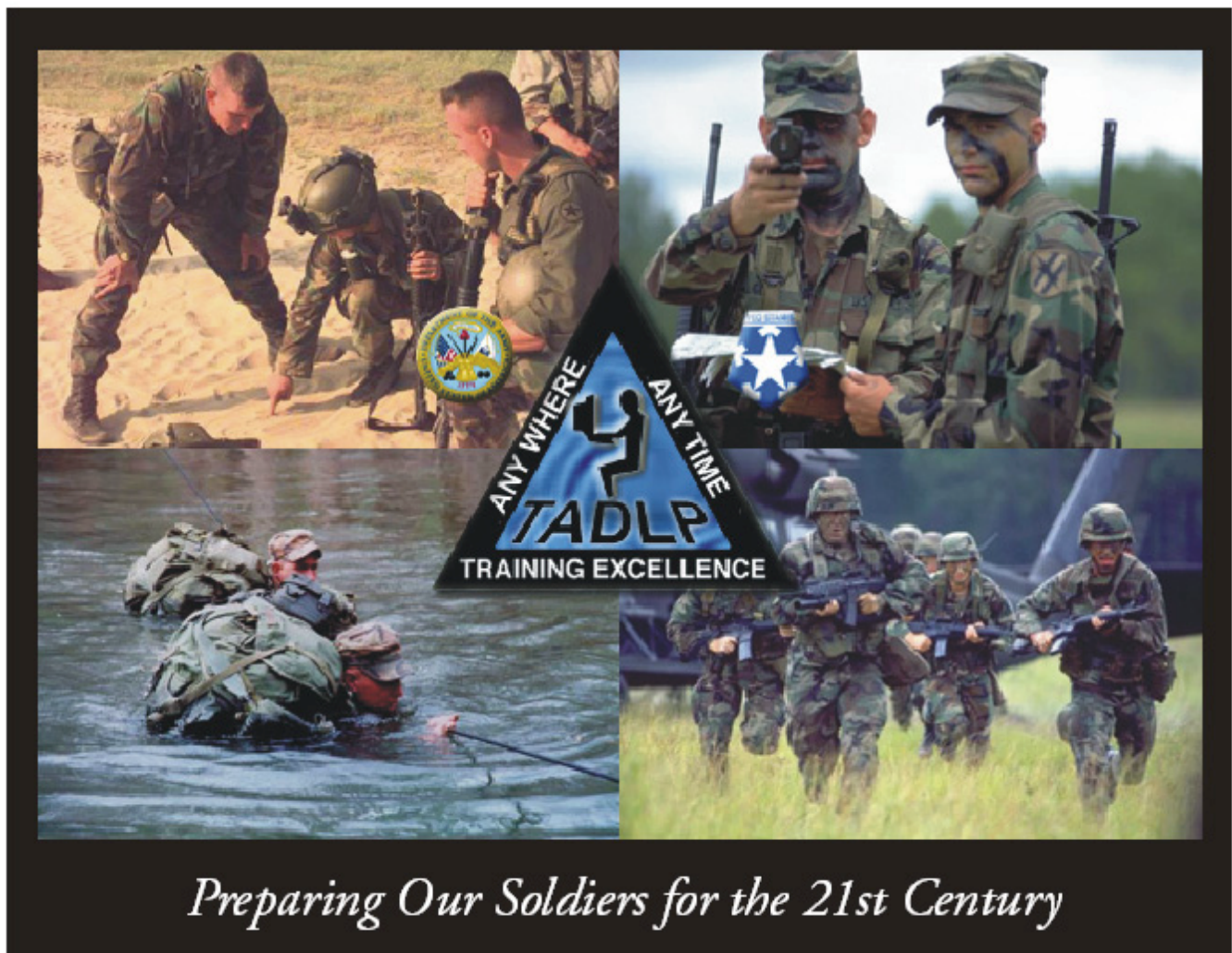
Chief Information Officer (CIO)/Congressional Clinger-Cohen Certification Report

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OFFICE OF THE PROJECT MANAGER
THE ARMY DISTANCE LEARNING PROGRAM

FY 2000 DoD APPROPRIATIONS ACT SECTION 8121(b)

THE ARMY DISTANCE LEARNING PROGRAM (TADLP)

CERTIFICATION AS TO COMPLIANCE WITH CLINGER-COHEN ACT

INTRODUCTION

This report responds to the requirements established in Section 8121(b) of the FY 2000 DoD Appropriation Act for the Department of Defense (DoD) Chief Information Officer (CIO) to certify that each major automated information system is being developed in accordance with the Clinger-Cohen Act of 1996 (40 U.S.C. 1401 et seq) prior to Milestone I, II, or III approval. Those major automated information systems (ACAT IAM and ACAT IAC, as defined in DoD Directive 5000.1) that are scheduled for Milestone I, II, or III approvals in FY 2000 are subject to certification. The statute also stipulates that notification to Congress must include, at a minimum, the funding baseline and milestone (MS) schedule (Appendix A), and specific confirmation (certification) that the following requirements have been satisfied with respect to the system:

    a. Business Process Re-engineering
    b. Analysis of Alternatives
    c. Economic Analysis--Calculation of a return on investment
    d. Performance Measures
    e. Information Assurance

The Army Distance Learning Program (TADLP) has been reviewed for compliance with each of the requirements above and the results of the certification review are reported in the following pages. This certification supports the MS III approval for Block 2. The appendix to this report contains TADLP funding baseline and MS schedules.

The Army CIO certifies that TADLP is being developed in compliance with the provisions of the Clinger-Cohen Act of 1996. Increased mission readiness of the Army, in particular the quality and critical training of personnel any where and any time in all Army active/reserve components, is the primary goal of TADLP. The modernized training delivery system will link Army service schools with the Army in the field through common-user telecommunications networks which will deliver standardized individual, collective, and self-development training to soldiers, civilian employees, and units using multiple means and

technologies. With the support of senior functional
stakeholders, training delivery processes have been redesigned
to improve performance by the application of information
technology and the use of a multimedia approach to training
delivery. The Army is leveraging industry and academia-proven
Distance Learning (DL) techniques to improve the quality of Army
training and reduce training costs. Maximum use is being made
of Commercial-off-the Shelf (COTS) Information Technologies (IT)
to support training-related and administrative processes. TADLP
has developed an incremental acquisition strategy to reduce
program risk by delivering specific mission functionality in
stand-alone increments that produce benefits independent of
future blocks. Through the use of results-based and
performance-based management of IT, specific qualitative and
quantitative measures have been derived for determining the net
benefits and risks of the investment. Information Assurance is
at an adequate level to support the mission.

THE ARMY DISTANCE LEARNING PROGRAM (TADLP) OVERVIEW

TADLP is a major automated information system that will
modernize training delivery in the existing Army training and
education system. Training delivery will be improved through
the application of IT and the use of a multimedia approach to
training delivery. The modernized training delivery system will
link Army service schools with the Force XXI Army in the field
through common-user telecommunications networks and postures the
Army's trainers to meet Army needs. It will allow trainers of
the future to reach more remote training locations, such as
installation classrooms, offices, and students' homes. This is
a significant training delivery enhancement. It will reduce
Transients, Trainees, Holdovers, and Students (TTHS) accounts
since soldiers will receive much of their training at their home
stations, or in close proximity to their homes. The system will
include Digital Training Facilities (DTFs) containing student
workstations, video equipment, and network access. When fully
deployed, TADLP will link over 383 DTFs at 132 locations and
will support 197,500 students annually. Mobile distance
learning components will connect with the communications
infrastructure to receive and deliver DL training to support
student surge requirements at Army installations and to provide
training for students in areas of low population density or
those deployed to remote locations.

In 1991, Department of Defense (DoD) directed the Army to
develop a plan to train soldiers and units where and when needed
by exploiting advances in IT. The Army approved the

implementation of TADLP in April 1996 and designated the
Commanding General, U.S. Army Training and Doctrine Command (CG,
TRADOC) as the Army Executive Agent (AEA).

The Army appointed a Project Manager (PM) to acquire and field
The Army Distance Learning Program (TADLP). TADLP is using an
incremental block acquisition strategy with six blocks currently
planned. Block 1 is being deployed and Block 2 design has
undergone operational testing in anticipation of a MS III
decision. TADLP consists of COTS hardware and office automation
(software applications integrated into an open system, personal
computer-based architecture).

- Block 1, Digital Training Facilities. This Block
  provides operational DTFs equipped with the
  infrastructure required to deliver modernized
  courseware. This Block is deployed and completed with
  distance learning courses, delivered primarily by CD-
  ROM and Video TeleTraining (VTT) with a two-way
  audio/video capability.

- Block 2, Common Core Services. Block 2 will network
  DTFs, courseware, and facilities with the existing
  communications infrastructures. It includes
  integrating and implementing all interfaces needed to
  satisfy identified training requirements. It provides
  a student learning space consisting of electronic
  messaging and DTF scheduling, collaboration tools;
  enterprise management with automated scheduling; and
  system administration. With this Block, students will
  also be provided access to Web-based courseware. Thirty
  Block 2 DTF prototypes are deployed and have undergone
  operational testing.

- Block 3, Learning Management System. Block 3 will
  provide the hardware and software for automated student
  administration, management, and scheduling, plus all
  functionality for Blocks 1 and 2. Block 3 will
  implement interfaces with major Army training related
  systems and applications (e.g., training requirements
  databases, training automation systems, personnel
  systems, automated information retrieval systems, major
  Army training systems, and national communications
  networks, and additional Active Army installations and
  USAR sites).

- Block 4, Network Migration. During this block separate video and data networks will be combined into a single network providing both services. Functions to be provided under Block 4 are desk-top VTC using H.323 services for live and on-demand requirements in conjunction with all functionality for Blocks 1-3.

- Block 5, Deployable DTFs. Block 5 will provide deployable DTF capabilities, plus those capabilities included for Blocks 1-4.

- Block 6, Simulation. Block 6 will provide student access to constructive and virtual simulations for training plus Blocks 1-5.

The program is currently structured to provide Blocks 1 through 3 as core threshold requirements. Blocks 4 through 6 are objective requirements that will be addressed in future capabilities and funding analyses.

a. Business Process Re-engineering (BPR)

Emerging technologies provide the capability to move from a synchronous, instructor-centered instruction to an asynchronous, student-centered learning delivered at the students' locations. This is being accomplished through technology that allows the instructor and students to be geographically separated and rely on electronic transmission, storage, delivery, and assessment of training products.

In 1989, the Army recognized a need to provide high-quality training when and where needed to support increased readiness while reducing overall training costs. The Army developed the "Distributed Training Program (DTP) Blue Book" to communicate overall goals and requirements and later it added DL into the Army's Long-Range Training Plan (ALRTP) for the Twenty-First Century (1989-2018). Army functional proponents began pilot programs to determine the best means to accomplish the DL mission.

Outsourcing the Army's mission to train soldiers was considered, however, it was determined that this is an inherently governmental function for the following reasons. Under Title 10, USC, the services are responsible for training forces for use by the National Command Authority (NCA). DL DTF design, development, management and operations have been outsourced and are under the direction of the PM TADLP. DL courseware

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development has also been outsourced and is under TRADOC direction.

TADLP is the engine that will power an evolutionary change from the current centralized service-school environment to a decentralized environment that supports soldiers in remote training locations, reduces the time students spend in residence at Army schools, and provides deployed forces with just-in-time training or training on-demand. Resident training will be reduced but not eliminated. Distance Learning facilitates the reduction of resident training times, thereby increasing soldiers availability at their duty stations.

Figure 1 identifies the Army's Integrated Management Structure for distance learning. A senior level Distance Learning Review Group comprised of functional and acquisition stakeholders reviews and prioritizes the Army's critical need. A DL General Officer Steering Committee (GOSC) establishes clear measures of accountability both functional and fiscal for program progress and to secure functional involvement and buy-in.
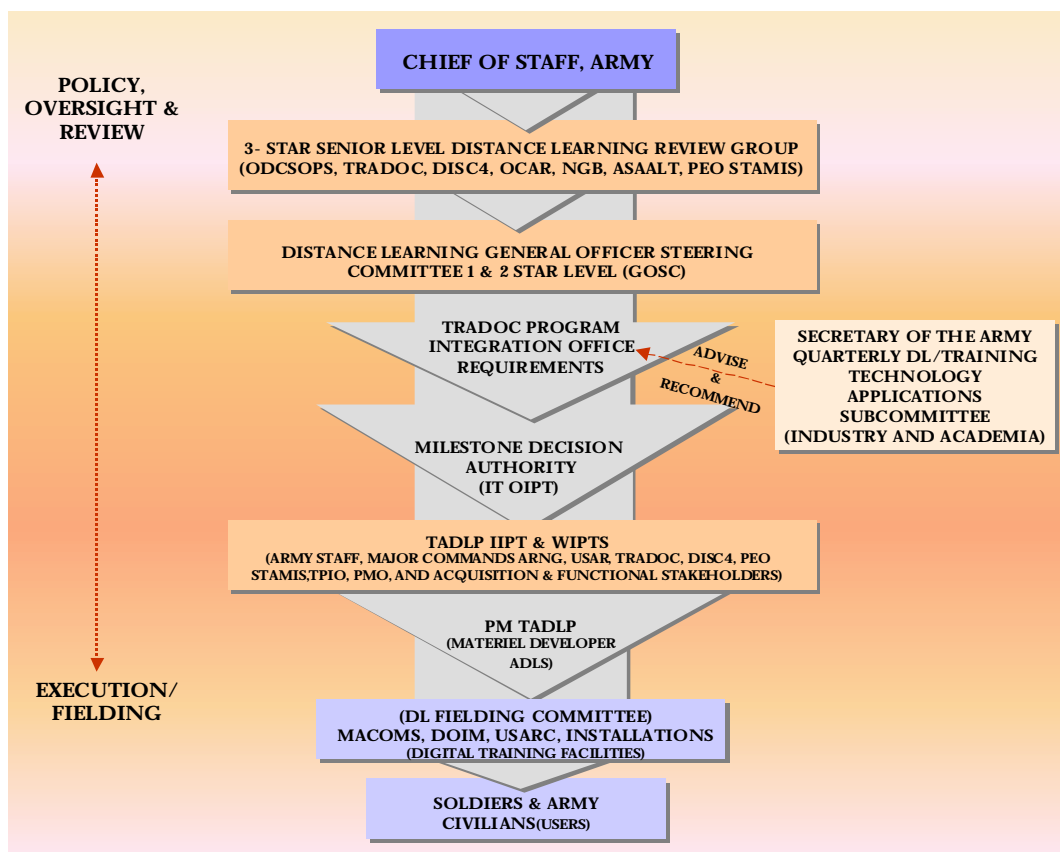
Figure 1 – TADLP Integrated Management Structure

The TRADOC Program Integration Office directs the requirement determination process and hosts a Secretary of the Army Quarterly DL/Training Technology Applications Subcommittee with industry and academia to advise and recommend innovative techniques and processes for DL. The involvement of the White House and OSD-sponsored Advanced Distributive Learning Initiative (ADLI) Office, and the Army National Guard, with all TADLP and Army Distance Learning initiatives, integrated product teams, and GOSCs ensures consistency between DoD DL activities. PM TADLP acquires and fields DL functionality consistent with program cost, schedule, and performance goals.

Existing business practices that support a predominantly institutional training environment have required significant re-engineering to accommodate the DL environment. Required changes are being reflected in DoD documentation prescribing common development standards for DL courseware and Learning Management Systems (LMS); in Army Regulation 350-1, *Army Training and Education,* and Department of the Army Distance Learning Policy Letter prescribing Army guidance for program implementation; and in TRADOC Regulation 350-70 prescribing how DL courseware will be developed. All of these regulatory documents are directed at establishing a common set of standards and goals for program implementation.

Historically, Military Occupational Skill (MOS)-qualifying training is provided in residence at designated service schools. This requires student population movements between home base and training sites. At the training sites, instructor personnel provide traditional classroom instruction and practical hands-on exercises in field conditions. Under DL, the training delivery process has been re-engineered so students can train at home station without instructor moderation using self-paced Interactive Multimedia Instruction (IMI) or web-based training.

A re-engineered training development (i.e., course conversion) approach will focus on standardized lesson plan formats using multimedia content. One common Program of Instruction (POI) will serve the entire Army [Active, Guard, Reserve, and Department of the Army Civilian (DAC)]. Training media is being developed to meet the student's time and location. Training products will be "pre-packaged" and "on-the-shelf," ready to support diverse operational requirements. There will be no distinction or differentiation on course completion documents or diplomas.

At the program level, BPR is also aggressively seeking to increase training and readiness mission effectiveness within the program's approved funding. Focusing on the priorities directed by the GOSC, a TADLP Working Group and TADLP DTF Fielding Committee, [comprised of Army Staff, Major Commands, Army National Guard, and U.S. Army Reserve, functional and technical experts, as well as TADLP Project Management Office (PMO) staff] seeks to simplify or redesign work processes to improve mission effectiveness and make maximum use of COTS/Government-off-the-Shelf (GOTS) technologies.

In the area of benchmarking, TADLP is constantly reviewing the best public and commercial business practices and initiatives to plan, analyze, and adapt program activities to gain improvement in its business practices. Through market surveys and investigations, the program has maintained pace with industry standards, which leads to implementation of effective, efficient, and suitable streamlined business processes. The use of COTS products ensures the program is optimizing and leveraging the best commercial industry techniques in meeting program requirements. In addition, TRADOC hosts a Secretary of the Army, DL Training and Technology Subcommittee comprised of industry and academia DL leaders and organizations. This committee helps to ensure that Army DL efforts capitalize upon lessons-learned, high payoff areas of application for information technology, and are consistent with industry benchmarks.

Specific Policy BPR example of TADLP is: The Chief of Staff, Army (CSA) directed and approved the implementation of TADLP in April 1996. The Army is revising training policy for DL. The revised policy will be incorporated into a new AR 350-1, TRADOC Regulation 350-70, and TADLP Campaign Plan. The process of conducting and distributing training was re-engineered and streamlined using CD-ROM and VTT in providing the Battle Staff Non-Commissioned Officer Course (BSNCO) from Fort Bliss, Texas to soldiers stationed in Europe and deployed to Bosnia. In the first 2 years (1998-1999), the BSNCO Course has graduated 788 students and resulted in a cost savings of approximately $2.9M in travel expenditures.

b. Analysis of Alternatives (AoA) (Summarized in Table 1)

Army's vision for TADLP focused on taking training to the soldier and the unit. To support this concept from 1989 to 1994, the Army conducted technology pilots, studies, and tests. These analyses evaluated the effectiveness of five DL

technologies in an Army training environment. The technologies
evaluated were: Video Teletraining; Asynchronous Computer
Conferencing; Computer-Based Instruction; Voice-Based Computer-
Based Instruction; and Desktop Video Production. Subsequently,
DoD sponsored a study on Computer-Based Training (CBT) entitled
"Effectiveness and Cost of Interactive Videodisc Instruction in
Defense Training and Education, July 1990" to validate the
approach for DoD-wide application. Results of these studies are
available through the Defense Technical Information Center.

Non-materiel Alternatives

Non-materiel alternatives in doctrine, organizational design and
training were identified and implemented. The Army has
eliminated 159 courses and reduced another 200 courses. For
example, all Advanced Individual Training (AIT) courses 10 weeks
or longer were reduced in length by 10 percent. Non-materiel
alternatives were insufficient to address all deficiencies;
therefore, a materiel solution was needed.

Materiel Alternatives

Even after non-materiel solutions were addressed, there were
still deficiencies in the current training system. The need is
to deliver the right training to the soldier and DACs at the
right time and the right place. Planned changes include
delivering training and education through distributed
technology. The means to deliver this training are via
electronic network and DTF, which are material items not readily
available from current Army infrastructure, other DoD
components, other government agencies, or the private sector.

Deficiencies in the current training system

Required reductions in the end strengths of the Active Component
(AC) and Reserve Component (RC) continue to lead to significant
changes in force structure. The Army will rely on smaller,
smarter, and more agile formations with greater reliance on RC
mobilization than in the past. Force structure changes will
increase training requirements, as more soldiers require
training in their new occupational specialties. Finally,
emerging non-traditional mission areas will further expand
requirements for training in unique, highly specialized and
sensitive skills. Increasingly constrained funds for travel,
coupled with limited time available for soldiers to spend in
training, will make the costs of traditional training methods
prohibitive.

The Army's current resident institutional training programs are personnel and facility intensive and expensive to operate and maintain. The manpower, facilities, training aids, devices, simulators and simulations (TADSS), ammunition, fuel, travel and per diem funds, and other training resources required to support the current training base are insufficient to educate and to train and sustain the skills soldiers and DACs need to perform required tasks.

The ability to obtain required professional military education is a challenge, especially for the RC. Many RC soldiers cannot attend courses at Army service schools, which requires them to be away from their civilian jobs for extended periods. Continued reductions in training funds and resources will result in soldiers not being trained to the standards required for their skills through the current training system. This has a negative impact on overall personnel readiness because soldiers cannot qualify in their MOS. Similarly, requirements for AC soldiers to be away from their units to perform operations other than war, to attend training, or to perform as Army Modernization Training (AMT) Subject Matter Experts (SME), negatively impacts unit readiness.

The NCA frequently levies unresourced requirements to deliver on-demand or just-in-time training for deploying units, and sustainment training to units deployed in contingency operations. Under the current system, these requirements are met by forming and deploying special training teams leaving shortages in the training base. The NCA's Force projection doctrine increases the number of deployments. New methods are required that will enable the Army to meet these unresourced requirements without the severe impact on training personnel.

AMT is manpower intensive and expensive. The current training system relies heavily on SMEs to provide AMT in the field. High levels of travel and per diem increase AMT costs and experienced personnel are drawn away from their units for extended periods of time diminishing force readiness and increasing training base deficiencies.

Impact of training system deficiencies on readiness

The predominant use of institutional training methods in an environment characterized by expanding requirements and diminishing resources can adversely impact MOS-qualification levels across the force. This is an unacceptable consequence,

given the Army's dependence on timely deployment/mobilization of trained, ready units particularly from the RC.

Milestones

      Milestone 0. The Army approved a Mission Needs Statement (MNS) on 17 April 1991 establishing the Army Distributed Training Program and began pilot studies to investigate innovative technologies for DL solutions. The Army developed an Army Distance Learning Master Plan that was approved by the CSA in 1996 and used as a foundation to create TADLP in 1997. In October 1997, the PMO TADLP was established to execute all acquisition aspects of the Program, with the exception of courseware development, for which TRADOC retained both functional and programmatic responsibilities. TADLP is an ACAT IAC Program with Information Technology Overarching Integrated Product Team (IT OIPT) oversight.

      Milestone I/II. The initial TADLP acquisition strategy was to provide DL capabilities in three Phases. These phases were Phase I, Develop Initial Operational Capability (IOC); Phase II, Develop Full Operational Capabilities (FOC); and Phase III, Sustainment of the Objective System. In February 1998, the MAISRC (now IT OIPT) for TADLP, approved the deployment of prototype/concept development classrooms in quantities not to exceed 10% of the objective number of TADLP classrooms; directed that a subsequent Army IT OIPT be held prior to the fielding of any classrooms beyond the 10% approved in the Acquisition Decision Memorandum (ADM), and, authorized Engineering and Manufacturing (EMD) for Phase II. Representative sets of the prototype classrooms were fielded and successfully completed a system assessment performed by the Army Test and Evaluation Command (ATEC). The PMO TADLP began fielding of the authorized Phase I classrooms.

      Milestone II/III. TADLP modified its acquisition strategy to an incremental strategy to provide DL capabilities in interoperable blocks consistent with Clinger-Cohen and the concept of modular contracting. By using this strategy the program can satisfy system requirements in successive acquisitions of interoperable segments known as blocks. Once a block upgrade is initiated, it will be completed with a MS III review within 18 months. Blocks are easier to manage; address complex IT objectives incrementally in order to reduce risk and deliver workable, tested solutions in discrete increments; and provide the opportunity to take advantage of evolving technology. In March 1999, the IT OIPT approved fielding an additional 75 Block 1 facilities (formerly Phase I) and MS II

for Blocks 2 through 5 (formerly Phase II) and Block 6 (formerly Phase III). The IT OIPT limited future block prototype deployments to 10% (75) of the objective number of DTFs, and directed that Block 2 MS III approval be obtained to field blocks beyond the 10% quantity limit.

Milestone	FY	Status Quo	Alternatives	Selection
0	1991	Traditional Training ■ Print Media ■ Resident Training at Training Schools & Centers ■ Correspondence Programs ■ Increasing TTHS costs ■ High overhead costs ■ Reduced manpower and funding levels ■ Reduced readiness	■ Relook resident training process and modernize ■ Eliminate gaps in training continuum ■ Improve training accountability ■ Enhance training capabilities through technology ■ Establish Program Management Office 1. Conduct Pilot Studies 2. Institute TQM Concept for training 3. Modernize resident instruction as total package	Alternative 1: ➤ Investigates available technologies ➤ Provides front-end –analysis ➤ Builds consensus and encourages integration into training ➤ Determine best mix of resident & multimedia combinations ➤ Provides analysis of courses for conversions ➤ Provides strategy for full implementation across Total force ➤ Instituted deployable training packages (Sinai, Bosnia, Germany, Macedonia) ➤ Least expensive ➤ Lowest risk
I/II (Block 1)	1998	Traditional Instruction, Print, VTT	■ Proof of principle ■ Technology and Print Pilot Testing ■ Total Army implementation of multimedia-based individual training ■ Continued deployable training via satellite training packages (Sinai, Bosnia, Germany, Macedonia) ■ Courseware development and fielding ■ Service schools, colleges and academies training standards for courseware & supporting training material met & exceeded 1. Implement TADLP Master Plan using procurement 2. Implement TADLP Master Plan using leases	Alternative 1: ➤ Meets functional requirements ➤ Meets funding constraints ➤ Low cost alternative ➤ Realistic schedule ➤ Incremental testing ➤ Supports courseware development. ➤ Increased Readiness ➤ Initiates culture change for training community

Table 1 TADLP AoAs

LEGEND
■ = Army activities and non-materiel actions to resolve DL training issues.
Numbers 1. or 2. or 3. = The Alternatives identified by the Army leading to a materiel solution.

Milestone	FY	Status Quo	Alternatives	Selection
III (Block 1) II (Blocks 2-6)	1999	Traditional Instruction Print, VTT, CD-ROM	■ Additional courseware developed ■ VTT capability (Terrestrial) ■ Messaging & Limited collaboration ■ Provide Web access ■ NTC training site collaboration with school and observe/controller completed Block 1 1. Proceed with fielding 2. Halt fielding Block 2 1. Perform Distributed Enterprise Management 2. Perform Centralized Enterprise Management	Alternative 1 Block 1: ➢ Fields initial operational system ➢ Meets functional requirements ➢ Supports entire Army ➢ Provides workstations and infrastructure at selected locations ➢ GOSC evaluates high risk/high impact requirements ➢ Continues culture change ➢ Facilitate use of CAIV Alternative 2 Block 2: ➢ Least Manpower Intensive ➢ Low cost solution and design
MS III (Block 2)	2000	■ Traditional Instruction, Print, VTT, Interactive Multimedia Instruction (IMI) ■ 114 Block 1 DTFs fielded and operational worldwide ■ Continuing fielding for Block 1 ■ Investing and determining requirements for a Learning Management and Student Management Component	■ Evolutionary & incremental Block Strategy implemented ■ Trade-offs (cost, schedule, and functionality) are made for each Blocks ■ Additional courseware being developed 1. Field Block 2 capability 2. Halt Block 2 fielding	Alternative 1 Block 2: ➢ Provides capability for IMI/WEB-based training ➢ Increased logistics capability for ESM ➢ GOSC, IPTS, and Working groups to define and analyze requirements and solutions. ➢ Continues culture change

Table 1 TADLP AoAs (Concluded)

LEGEND
■ = Army activities and non-materiel actions to resolve DL training issues.
Numbers 1. or 2. or 3. = The Alternatives identified by the Army leading to a materiel solution.

Notes: (1) MS 0 to MS 1 the Army conducted studies and analyses of non-materiel solutions. These alternatives are reflected in this table. Upon evaluation of these alternatives the decision was to implement a materiel alternative. This resulted in establishing TADLP. (2) Market and cost effectiveness analyses were conducted to determine the best materiel solution based upon the requirements identified in the Operational Requirement Document. (3) Acquisition Strategy was modified from Phases to Blocks to reduce risks and to accelerate Fieldings.

c. Economic Analysis

In December 1998, the PMO developed an Economic Analysis (EA-I) in support of Block 1 and Block 2 Milestone Decision Review. The Army completed a Sufficiency Review of this EA in April 1999. While the EA did not support the milestone decision review, the Army had enough confidence in the program to support fielding an additional 75 Block 1 facilities and MS II for entry into Block 2 Engineering and Manufacturing Development (EMD).

Both an Economic Analysis Development Plan (EADP) and a Cost Analysis Requirements Description (CARD) have been approved by the Army. The PMO delivered EA-II for TADLP IT OIPT review on 15 June 2000 for MS III for Block 2. TADLP EA –II presents background, assumptions, constraints, objectives, alternatives, cost elements, and potential benefits of all feasible alternatives for TADLP Blocks 1 and 2. Each Block is treated as a stand-alone package that is not dependent upon subsequent blocks to meet its operational objectives. As each Block is implemented, the DL system evolves into a more efficient and effectively managed enterprise providing DL system management benefit and added functionality through operating synergy. There are three materiel alternatives presented in the EA –II analysis: Alternative 1 is the Status Quo, Alternative 2A is the cost of Blocks 1 through 3) with a Block 3 COTS solution; and, Alternative 2B is the cost of Blocks 1 through 3 with a Block 3 GOTS solution. The Army has reviewed and approved the EA. The estimate for the selected alternative, adjusted for affordability, has been approved as the Army Cost Position (ACP) forming the cost baseline for the program. The EA will be updated prior to each Block MS III review.

TADLP EA strategy focuses on: (1) updating the expected return on investment (ROI) [ROI is calculated as the ratio of the present value of the Benefits to the present value of the Investment Costs incurred over the remainder of life cycle of the selected DL alternative] of the program prior to each Block's MS review (i.e., fielding decision); and, (2) tracking the actual benefits of the "total" system on an annual basis. This strategy was developed in accordance with DoD guidance and provides appropriate reviews of the evolving cost, savings and benefit implications. This strategy permits TADLP PMO to: (1) evaluate the projected quantitative and qualitative benefits of each block prior to it's fielding, and (2) qualitatively experience the increased efficiency and effectiveness of DL enterprise management with each block added.

Benefits Summary. The projected cost savings and benefits metrics support the selected Alternative 2A (Block 3 COTS solution). TADLP benefits include cost savings and productivity improvements. TADLP helps to implement the vision of the DoD Information Technology Management Strategic Plan by providing training any time, any where to support worldwide decision-making and operations. It supports information superiority by leading the way in providing on-demand training, making training a mission partner that satisfies emerging customer needs. It also uses IT to reform training and increases the efficiency and mission contribution of the training community to the warfighter. As an EAL-3 Trusted Computing Base validated system, it will ensure that Sensitive but Unclassified (SBU) information resources are protected.

TADLP Quantifiable Benefits. Dollar-quantifiable benefits are measured, documented, and evaluated using ROI and other industry accepted metrics.

Cost Savings: TADLP will yield measurable cost savings estimated to be approximately $ 878.2 (Present Value Dollars in Millions) over the 16-year period of analysis between FY 2000 through FY 2015. The anticipated breakeven point for TADLP is FY 2011 and the current estimated ROI is 5.1. At each MDR, an EA will be updated to more accurately assess the breakeven point and ROI. These cost savings are the result of a reduction of Army institutional-based resident training and related training support costs, student per diem, and student permanent change of station costs all of which are attributable to reduced periods of resident training at schools and academies.

Productivity Improvements: In addition to quantifiable cost savings, the implementation of TADLP will reduce future Work Years requirements by enabling training support personnel to accomplish routine tasks more efficiently. The benefits are attributable to reduced and more efficient use of manpower, facilities, trainer support costs, vehicles, maintenance, travel, communications, and reproduction. Of particular note is the projected increase in military man-year (MMY) productivity of approximately 38K MMY over the 16-year period of analysis providing productivity improvements estimated to be approximately $1346.9 (Present Value Dollars in Millions). A MMY is 2,080 hours of military effort.

TADLP Non-Quantifiable Benefits.

Readiness: The primary thrust for the DL initiative is improved readiness. The DL initiative will allow dramatic increases in the numbers of soldiers who can be provided critical MOS-related training. Coupled with The Army Training System (TATS) standards-based effort, it will also result in improvements in the quality of the MOS-related training provided. These enhancements to Army's training capability will improve basic soldier's skill levels for members of all components (Active, Reserve, and Civilians). Improvements in basic skill levels will result in better, more capable soldiers in all components. As a result, total Army readiness levels will increase.

Instructor Certification/Qualification: DL provides the capability to train and certify instructors, assistant instructors, and DTFs managers.

New Equipment Training (NET): DL will provide AMT to the Joint Force.

Interoperability with the Reimer Digital Library (RDL): The RDL provides access to training knowledge sets and interactive applications.

Diagnostics: Use diagnostics to identify the training need, or to avoid unnecessary training. Under TADLP and the Army Training XXI initiatives, proponent schools will develop diagnostics tools to identify the student's performance deficiencies. This permits more efficient use of DL resources by focusing on training needs, and promotes student interest by avoiding redundant or superfluous training.

Contingency Mission Training and Rehearsals: DL provides the capability for timely, customized, mission-specific training to deploying soldiers and units.

Standardize Inter-Service and other Federal Agency Training Packages: Open architecture and common communication infrastructure, provides the capability to inter-operate Army DL equipment, facilities, and training products with sister Services and other Federal agencies.

Technology: Future technologies will bring new capabilities and efficiencies in the mid- and far-term. Current training technologies and foreseeable near-term enhancements have been

used to develop a programming baseline and project future funding requirements and training capabilities.

Unit Operating Strength Enhancement: As resident courses are restructured to incorporate DL training, there will be a 35-40 percent reduction in course length for the same POI at the same subject and skill level. This reduction in training time will result in students being returned sooner to, and retained longer at, their normal unit duty station.

Financial Findings.

The measure of financial merit indicates that over the life cycle of the program, the benefits stream substantially exceed costs taking into account the time value of money at Table 2:

| EVENT | FY | INVESTMENT | TOTAL COSTS | PROGRAM BENEFITS | | TOTAL BENEFITS | ROI |
				SAVINGS	PRODUCTIVITY IMPROVEMENTS		
MS 0	1991	$ 247.0	$ 431.0	$ 797.4	$ 797.4	$ 1,565.3	6.3
MS I/II	1998	$ 247.0	$ 431.0	$ 797.4	$ 797.4	$ 1,565.3	6.3
MS IIIa MS I/IIb	1999	$ 247.0	$ 431.0	$ 797.4	$ 797.4	$ 1,565.3	6.3
Program Restructure from Phased strategy to Block strategy							
MS IIIb	2000	$ 439.3	$ 857.0	$ 878.2	$ 1,346.9	$ 2,225.1	5.1

Table 2 TADLP Economic Analysis History
(Present Value Dollars $ in Millions)

Notes:
- Investment Costs are all costs associated with the development, production/procurement, and deployment costs of TADLP automated information system achieved over the Life Cycle of the preferred DL alternative. [Source; Department of the Army, Economic Analysis Manual, July 1995].

- Total Costs includes the costs of development, production/procurement, deployment, and system operating and support achieved over the Life Cycle of the preferred DL alternative for the Army Distance Learning initiative. [Source; Department of the Army, Economic Analysis Manual, July 1995].

- ROI is calculated as the ratio of the present value of the Benefits to the present value of the Investment Costs incurred over the remainder of life cycle of the selected DL alternative.

- The numbers for MS Reviews prior to program restructure are the same because TADLP did not have a validated Economic Analysis at those times. The numbers reflect the Combat Developer's cost estimate at Milestone 0.

- MS III Block 1 and 2 numbers are consistent with the USACEAC validated Economic Analysis approved 19 September 00 and the approved Army Cost Position (ACP).

d. Performance Measures

Results-based (i.e., mission-oriented). TADLP Key Performance
Parameters (KPP) objectives and thresholds are documented in
TRADOC ORD for a Modernized Training System (Revised) dated 27
August 1999 and in the APB. Management of these requirements is
realized through the System Subsystem Specification (SSS) and the
System Requirements Specification (SRS). Progress against these
performance goals is tracked. Examples of performance measures
follow:

- Number of DTFs fielded. Through Third Quarter FY00, PM
  TADLP fielded 145 Digital Training Facilities.
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- Number of students trained. Through Third Quarter FY00,
  TADLP Digital Training Facilities have sustained the
  training of 52,779 students averaging approximately 3,000
  students per month. The Cumulative Report by Hours of
  Training as of 30 June 2000 is depicted in Table 3 below:

Cumulative Hours VTT Training	Cumulative Hours IMI Training	Cumulative Hours Other Training	Total Training Hours Usage	Cumulative DTF Students
10,928	4,919	19,784	35,631	52,779

Table 3   TADLP Utilization

Performance-based acquisition management has been integrated
into program management through the use of earned value
management and software metrics management techniques. All work
is planned, budgeted, and scheduled in "time-phased" increments
constituting a cost, schedule, and performance measurement
baseline. The approach encourages the prime contractor to
employ internal cost and schedule management control system and
to permit the PMO to rely on timely data produced by those
systems for determining product-oriented contract status.

e.   Information Assurance

BACKGROUND. All DoD activities and services must provide
sufficient protection to prevent unauthorized penetration of
information networks. The Defense-Wide Information Assurance
Program (DIAP) was formed to ensure protection and reliability
of the Defense Information Infrastructure (DII) and also provide
a common management framework to ensure accomplishment within

the Global Information Grid (GIG) components. The Army's
Information Systems Security Program (AISSP) is the overarching
program for securing the Army's portion of the DII. As the
Program Executive Office (PEO) Standard Army Management
Information Systems (STAMIS), responsible for the material
development of the Army's business systems, it is imperative the
provisions of overarching IA guidance are implemented during the
development stages to ensure a successful integration into the
GIG when fully fielded. To accomplish this mission, PEO STAMIS
has put in place a security management structure capable of
reacting to vulnerability alerts, certifying and accrediting
development applications, monitoring compliance of these
applications to all IA guidance while maintaining readiness, and
ensuring a Defense-in-Depth (DiD) approach to assuring that
availability, integrity, authentication, confidentiality, and
non-repudiation attributes are embedded in the Army's mission
essential and mission support systems. With respect to
certification and accreditation of systems under the purview of
the PEO, strict adherence to the provisions of DoD Instruction
5200.40, DOD Information Technology Security Certification and
Accreditation Process (DITSCAP), as directed by the DoD CIO
Policy Memorandum 6-8510, Information Assurance for the DoD is
accomplished. Specifically, when a Mission Need has been
identified and approved by higher authority, the Program Manager
is instructed to notify PEO STAMIS IA staff. When the Request
for Proposal is developed by the PM office, the IA staff
provides the appropriate security terminology to ensure the
selected contractor knows the system must contain evaluated and
JTA compliant systems and services. Upon notification of
contract award, a kick off meeting with PM staff, security
personnel, and Plans and Programs Directorate personnel takes
place. The PEO IA staff takes the lead for identifying security
requirements for implementation within the system and instructs
the PM to request the appointment of a Certification Agent (CA)
to serve as the independent evaluator/tester during the
security-testing phase. The PM is also instructed to schedule a
registration meeting with the PM staff to include development
contractor representation, the CA, Designated Approving
Authority Representative (DAA Rep), and the functional user.
The PEO IA staff facilitates the meeting where the provisions of
the DITSCAP are provided and a road map for accomplishment of
the 4 phases is developed. At the completion of the meeting,
all participants sign the System Security Authorization
Agreement specifying the security requirements to meet, the
certification approach to be utilized, the time lines to
accomplish certification, and the costs associated with the
security effort. This document is continually updated as

requirements to the baseline change and is the responsibility of the security POC at the individual PMs to accomplish. The result of this effort is a standard set of security documentation that identifies all activities to accomplish certification, an evaluation of the products and services to ensure compliance to directives, results of security testing with recommendations from the independent evaluator, and the approved generic accreditation by PEO STAMIS.

TADLP Information Assurance Summary

On 2 March 1999, PEO STAMIS, as the Army's Designated Approving Authority (DAA), approved security accreditation for Block 1 in accordance with AR 380-19 and the Defense Information Technology Security Certification and Accreditation Process (DITSCAP). On 3 May 1999, TADLP Block 2 DITSCAP was initiated. Interim Approval to Operate (IATO) was granted on 12 August 1999. TADLP security strategy is traceable through requirements, design, implementation, and operating procedure documents. This strategy is documented in TADLP System Security Authorization Agreement (SSAA).

The SSAA, System Security Policy Statement, Automated Information System Security Plan, Initial Risk Assessment Survey (IRAS), Trusted Facility Manual and Security Users Features Guide address the specific security features of TADLP and establish the integration of all the security disciplines and how these features will be implemented, tested and certified. An IRAS was performed covering Computer, Administrative, Physical, Communications and Network Security to identify risks and support the acquisition and implementation of appropriate security countermeasures. Countermeasures identified were necessary to support an EAL-3 Trusted Computing Base operating in a System High mode of operation. The DAA, or his designated representative, will continue to validate all security requirements and certification and accreditation plans, approve the system security authorization agreement, and provide accreditation, as necessary.

On 11 May 2000, TADLP Block 2 successfully completed Security Certification Testing necessary for Block 2 Security Accreditation. TADLP successfully completed Development Test and Evaluation (DT&E) on 2 June 2000, and entered Operational Test and Evaluation (OT&E) on 10 June 2000. The TADLP Block 2 was Accredited on 18 Jul 2000 by the PEO STAMIS.

APPENDIX A

THE ARMY DISTANCE LEARNING PROGRAM

Funding Baseline

The table below presents TADLP funding levels, as they have existed at each MS Review and funding by Block Upgrade over the POM.

Milestone	Actual Date		FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	Total
0	17 Apr 91	Required	7.1	6.6	4.4	26.4	32.2	45.4	15.4											137.5
		Funded	7.1	6.6	4.4	26.4	32.2	45.4	15.4											137.5
I/II (Ph I & II)	27 Feb 98	Required								29.7	43.5	42.3	71.5	63.3	66.6	64.4	67.5			448.8
		Funded								29.7	43.5	42.3	71.5	63.3	66.6	64.4	67.5			448.8
Courseware	27 Feb 98	Required								24.1	13.6	41.6	35.8	23.5	65.9	0.0	0.0			204.5
		Funded								24.1	13.6	41.6	35.8	23.5	65.9	0.0	0.0			204.5
IIIa, Ph I / I/IIb, Ph II	8 Mar 99	Required									48.8	41.8	72.1	68.6	66.1	72.9	85.3			455.6
		Funded									48.8	41.8	72.1	68.6	66.1	72.9	85.3			455.6
Courseware	8 Mar 99	Required									21.9	17.0	22.6	24.6	28.1	30.5	27.4			172.1
		Funded									21.9	17.0	22.6	24.6	28.1	30.5	27.4			172.1
Pre-Restructure Summary		Required	7.1	6.6	4.4	26.4	32.2	45.4	15.4	53.8	70.7	58.8	94.7	93.2	94.2	103.4	112.7			819.0
		Funded	7.1	6.6	4.4	26.4	32.2	45.4	15.4	53.8	70.7	58.8	94.7	93.2	94.2	103.4	112.7			819.0
Program Restructure from Phased Strategy to Block Strategy																				
III, Block 1	Mar 99	Required									16.4	25.9	32.0	27.5	32.8	30.7	27.4	25.7		218.5
		Funded									16.4	25.9	32.0	27.5	32.8	30.7	27.4	25.7		218.5
III, Block 2	Sep 00	Required									10.2	17.6	12.9	15.7	15.6	17.7	21.7	29.1		140.6
		Funded									10.2	17.6	12.9	15.7	15.6	17.7	21.7	28.5		140.0
III, Block 3	Sep 01	Required									0.9	5.7	6.2	3.7	3.8	3.7	3.9	4.1		32.0
		Funded									9.1	2.2	6.5	3.9	3.9	3.9	4.1	0.0		33.5
Courseware		Required									17.1	22.7	24.6	28.1	30.3	27.6	27.4	28.8		206.6
		Funded									17.1	22.5	24.6	28.0	30.4	27.3	27.3	27.3		204.6
Post-Restructure Summary		Required									44.6	72.0	75.7	75.1	82.5	79.8	80.4	87.6		597.7
		Funded									52.8	68.3	76.0	75.2	82.7	79.6	80.6	81.5		596.6

TABLE 4 FY91-07 Funding Baseline [Current (Then Year) Dollars in Millions]

NOTES:
- Block 1 = Phase I; Blocks 2-5 = Phase II; and Block 6 = Phase III.

- MS 0, 1991 – These figures represent TRADOC's initial Affordability Analysis for the Distributed Training Program in support of its MS O approval.

- MS I/II, 1998 – Granted MDA approval to enter Engineering and Manufacturing Development (EMD). Funding is based on President's Budget 99 for Program Acquisition Cost (PAC).

- MS IIIa, Phase I and MS I/IIb, Phase II - Granted MDA approval to enter
  EMD for Block 2 and Block 1 fielding. Funding based on President's Budget
  Guidance 00 for PAC.

Program Restructure - The complexity of Phase II requirements, which were not
fully defined, and the immaturity of technology associated with the
requirements, resulted in Program's restructuring after MS I/II from a Phased
strategy to an incremental Block Upgrade strategy. This restructuring
provides the customer with operational stand-alone baseline capabilities that
are progressively enhanced with each successive Block as technology and
requirements mature.

Program Restructure reflects requirements and funding attainable within POM
FY02 – FY07 (POM File 4) to BES FY 02/03.

TADLP FY00 and FY01 funding imbalances to be corrected per PEO STAMIS
Memorandum of Agreement to USACEAC & Army PA&ED

TADLP FY07 funding imbalance to be corrected in next POM update per
Memorandum of Agreement from Army ODSCOPS Training (PEG) to USACEAC & Army
PA&ED

Table 5 presents the cost linkage (to include life-cycle cost
estimate (LCCE)) between TADLP Program Management Plan (PMP)/
Acquisition Program Baseline (APB), TADLP IT-43/300B Exhibits,
and TADLP EA.

MS	FY	PMP/APB			IT-43/300B		EA
		Required	Funded	LCCE	Funded	LCCE	LCCE
0	1991	$137.5	$137.5	$1,581.0	$137.5	$1,581.0	$1,581.0
I/II	1998	$653.3	$653.3	$1,581.0	$653.3	$1,581.0	$1,581.0
IIIa, Ph I I/IIb, Ph II	1999	$627.7	$627.7	$1,581.0	$627.7	$1,581.0	$1,581.0
III	2000	$597.7	$596.6	$1,185.7	$596.6	$1,185.7	$1,185.7

Table 5 PMP/APB, IT-43/300b, and EA Cost Linkage
[Current (Then Year) Dollars in Millions]

Milestone Schedule

Table 6 presents the Project's MS schedule.

PROGRAM	MS 0	MS I	MS II	MS III
Phases I - III	17-Apr-91		*	
Program Restructure from Phased strategy to Block strategy				
Block 1		27-Feb-98	8-Mar-99	2 QTR FY99 **
Block 2			8-Mar-99	4 QTR FY00
Block 3			8-Mar-99	4 QTR FY01

TABLE 6. Approved TADLP MS Schedule

NOTES:
* At Milestone 0, Future milestone dates were not developed pending establishment of a Program Office. MAISRC requested, once PMO established, program would transfer to PEO for acquisition oversight.
** MDA approved a limited fielding of 75 Block 1 DTFs and for Block 2 entry into MS II Engineering and Manufacturing Development (EMD) contingent upon (1) a favorable USACEAC EA Sufficiency Review, (2) Army PA&E approval based on EA Sufficiency review, (3) a favorable OPTEC (ATEC) System Assessment Report, and (4) Security Accreditation approved by PEO STAMIS. These contingencies have subsequently been met and removed.

GLOSSARY OF ABBREVIATIONS AND/OR ACRONYMS

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AC        Active Component
ACP       Army Cost Position
ADLS      Army Distance Learning System
ADM       Acquisition Decision Memorandum
AEA       Army Executive Agent
AIT       Advanced Individual Training
AIS       Automated Information Systems
AMT       Army Modernization Training
APB       Acquisition Program Baseline
ALRTP     Army's Long-Range Training Plan
ARNG      Army National Guard
ATEC      Army Test and Evaluation Command
BIR       Benefit /Investment Ratio
BPR       Business Process Engineering
BSNCO     Battle Staff Non-Commissioned Officer Course
C4I       Command, Control, Communications, Computers, and
          Intelligence
CAN       Campus Area Network
CAIV      Cost As an Independent Variable
CBI       Computer-Based Instruction
CARD      Cost Analysis Requirements Description
CBT       Computer-Based Training
CD-ROM    Compact Disks-Read Only Memory
COE       Common Operating Environment
CONUS     Continental United States
COTS      Commercial Off The Shelf
CRB       Cost Review Board
DAA       Designated Approving Authority
DAC       Department of Army Civilian
DCST      Deputy Chief of Staff for Training
DISA      Defense Information Systems Agency
DISN      Defense Information System Network
DITSCAP   Defense Information Technology Security Certification
          and Accreditation Process
DL        Distance Learning, US Army Network of Program of
          Instruction (POI)
DoD       Department of Defense
DT&E      Development Test and Evaluation
DTF       Digital Training Facility
DTP       Distributed Training Program
EA        Economic Analysis
EAL-3     Evaluation Assurance Level-3
EMD       Engineering and Manufacturing Development
ESM       Enterprise System Management
FOC       Full Operational Capability
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GFE	Government Furnished Equipment
GOSC	General Officer Steering Committee
GOTS	Government Off-The-Shelf
HQDA	Headquarters Department of the Army
IATO	Interim Approval to Operate
IMI	Interactive Multimedia Instruction
IOC	Initial Operational Capability
IRAS	Initial Risk Assessment Survey
IPR	In Process Review
IPT	Integrated Product Team
IT	Information Technology
IT OIPT	Information Technology Overarching Integrated Product Team
JTA	Joint Technical Architecture
KPP	Key Performance Parameters
LAN	Local Area Network
LCC	Life Cycle Cost
LCCE	Life Cycle Cost Estimate
MAISRC	Major Automated Information System Review Council
MACOM	Major Army Command
MDA	Milestone Decision Authority
MDR	Milestone Decision Review
MFP	Materiel Fielding Plan
MMY	Military Man Year
MNS	Mission Need Statement
MOS	Military Occupational Specialty
MS	Milestone
MTS	Modernized Training System
NCA	National Command Authority
NDI	Non-Developmental Items
NET	New Equipment Training
NPV	Net Present Value
NTC	National Training Center
OCD	Operational Concept Description
OCONUS	Outside Continental United States
OMA	Operation and Maintenance, Army
OPA	Other Procurement Army
ORD	Operational Requirements Document
OSD	Office of the Secretary of Defense.
OT&E	Operational Test and Evaluation
OTP	Operational Test Plan
O&S	Operations and Support
ORD	Operational Requirements Document
PEO	Program Executive Officer
PEOSTAMIS	Program Executive Officer, Standard Army Management Information Systems
PM	Program Manager

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PMO       Program Management Office
POC       Point Of Contact
POE       Program Office Estimate
POI       Program of Instruction
POM       Program Objective Memorandum
RC        Reserve Component
RDTE      Research, Development, Test and Evaluation
ROI       Return on Investment
SBU       Sensitive but Unclassified
SDP       Software Development Plan
SDT       Software Developmental Test
SME       Subject Matter Expert
SMMP      System MANPRINT Management Plan
SSAA      System Security Authorization Agreement
SSS       System Subsystem Specification
SS        Supportability Strategy
SRS       System Requirements Specification
STAMIS    Standard Army Management Information System
TA        Technical Architecture
TADLP     The Army Distance Learning Program
TAFIM     Technical Architecture for Information Management
TEMP      Test and Evaluation Master Plan
TM        Technical Manual
TMA       Training Mission Area
TO&E      Table of Organization and Equipment
TPIO      TRADOC Program Integration Office
TQM       Total Quality Management
TRADOC    US Army Training and Doctrine Command
TTHS      Transients, Trainees, Holdees, and Students
VTT       Video Tele-Training
USAR      United States Army Reserve
WAN       Wide Area Network
WWS       Workstation Server
WWW       World Wide Web
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